FUNDACION PARAGUAYA(A): THE SAN FRANCISCO SCHOOL

Martin Burt always enjoyed the end of the day as he took time to stop and reflect on that day's activities and what they meant for the work of Fundacion Paraguaya and its ability to help the poor. Today, however, Martin's thoughts revolved on a more current and pressing issue: the ability of his organization to replicate the remarkable success they had enjoyed at the San Francisco Agricultural School. Martin had co-founded a new school in the Mbaracayu, a Paraguayan National Forest Reserve. Everyone in the organization had known that the new school would operate with a different focus but they believed the core business model used at the San Francisco School would transfer to the new location. Now, several months into the new project and facing decisions about substantial investments in infrastructure, Martin wondered just how replicable the model would be and what his next steps should be.

FUNDACION PARAGUAYA

Landlocked and located in the center of South America, Paraguay obtained independence from Spain in 1811; however, numerous wars with its neighbors—Brazil on the east, Argentina on the west, Bolivia to the north, and Uruguay to the south--hampered growth and development by claiming many lives as well as economically valuable territory. In the War of the Triple Alliance of 1865-70, Paraguay lost two thirds of all adult males[1]. After 35 years of dictatorships Paraguayan's went to the polls in 1989 and democratically elected a president and parliament; the country has maintained a constitutional democracy ever since.

The World Bank classifies Paraguay as a "lower middle income country." **Exhibit 1** provides more detailed data on life in Paraguay. About 60% of Paraguay's roughly 6.4 million residents reside in cities with the remaining 40% spread over the roughly 400,000 km^2 of countryside. Average annual income for Paraguayans is $2,270 (US), or about $6.25 per day, and 40% live under the country's poverty line, defined as around $5.30 per day. The formal economy is largely service-driven, with 55% of the labor force and 61% of GDP working in this sector, followed by agriculture with 26.5% and 20.1%, respectively, and then industrial production with 18.5% of the labor force and almost 19% of output. The formal economy depends not only on domestic demand but on trade with its neighbors, often complicated by less than equal trade policies, another result of the years of conflict with its neighbors.

Professor Paul C. Godfrey prepared this case with the help of Raymond Kearney, Jasmine Palmer, and Todd Manwaring as a basis for class discussion and not to illustrate either effective or ineffective practice. Some license has been taken in the presentation and exclusion of all relevant case information.

[1] Data on Paraguay drawn from https://www.cia.gov/library/publications/the-world-factbook/geos/pa.html, and http://data.worldbank.org/country/paraguay.

Paraguay contains a substantial underground economy. According to research by Guillermon Vuletin for the International Monetary Fund Paraguay has the largest informal sector in Latin America, accounting for somewhere between 65 and 70% of the country's total economic output[2] which was the largest among the 32 countries studied. Most of the underground economy is not criminal in nature but rather people working "off the books," in unregistered business activity. Work in the informal economy pays less than formal economy work, provides no benefits such as unemployment or health insurance, and often leaves participants more exposed to corrupt and extorting government officials[3]. These lower wages strike especially hard at those involved in rural agriculture. Research data from around the world indicates that rural workers earn about 30% less than their urban counterparts, and are 40% more likely to lack permanent earning work[4]. An economy with large agricultural and informal sectors may help explain why Paraguayan average income is so low relative to its neighbors, Argentina at $7,570, Brazil at $8,040, and Uruguay at $9,360[5].

Martin Burt founded Fundacion Paraguaya (FP) in 1985 after returning to Paraguay from the United States. Martin received a Bachelor's degree in 1980 from the University of the Pacific in Public Administration and a Master's degree in Science, Technology, and Public Policy from George Washington University in 1983. Martin's personal goal was to advance civil society and raise the quality of life in his country. FP became his first installment in living that mission.[6] FP sees itself as "a leading edge social enterprise that seeks to develop innovative solutions to poverty and unemployment.[7]" **Exhibit 2** details the organization's mission, strategic objectives, and core values.

FP was the first microfinance organization in Paraguay[8] and would grow within 25 years into an organization providing technical assistance, management training and loans totaling $18 Million to over 45,000 Paraguayans and has reached over 20,000 youth through its entrepreneurship and educational programs. With a staff of about 200, FP serves clients in 136 cities and towns in 10 provinces through a network of 25 regional offices. FP was a strong and resilient organization; one that continued to grow and flourish even when Martin took a leave of absence to serve as the mayor of Asuncion from 1996-2000.

[2] Vuletin, G. 2008. Measuring the informal economy in Latin America and the Carribean, International Monetary Fund, IMF Working Paper.
[3] Hernando deSoto describes many of the perils of the informal economy in his book, The mystery of capital. New York: Basic Books, 2000.
[4] Winters, P., de la O, A. P., Quinones, E. J., Hertz, T., Davis, B., Zezza, A., and Covarrubias, K. Rural wage employment in developing countries. Riga Publications.
[5] Data drawn from the World Bank http://data.worldbank.org/ for the detailed countries.
[6] Data for this section, and other parts of the case, drawn from Pless, N. M., Maak, T., and Stoetter, N. "Poverty Alleviation and Responsible Leadership in Paraguay: The case of Fundacion Paraguaya." Unpublished case.
[7] Data from http://www.fundacionparaguaya.org.py/index.php?id=filosofia. Accessed 10 January 2011.
[8] http://www.fundacionparaguaya.org.py/index.php?c=225&i=2, accessed 30 November 2010.

THE SAN FRANCISCO SCHOOL[9]

In 2002 a group of Roman Catholic priests, *The Congregation of the La Salle Brothers*, approached Martin and Fundacion Paraguaya about assuming ownership and control of the San Francisco Agricultural School. As a part of their microfinance organization Fundacion Paraguaya had developed a substantial program of micro-credit support for agriculture and business as well as a financial education program for youth based on the international Junior Achievement model. The La Salle Brothers looked to these successes and believed that Martin's organization would be a perfect inheritor of the school because the foundation had the financial resources to assist with lines of credit to graduates of the school. In addition, FP had the ability to offer courses in business and entrepreneurship to students at the San Francisco School. Plus, Fundación Paraguaya had a clear objective of helping youth overcome poverty through economic self-reliance.

The San Francisco Agriculture School is situated on the edge of the Paraguayan Chaco in an area called Cerrito, on the outskirts of the city of Benjamín Aceval, about 46 km north of the nation's capital, Asuncion. The main campus lies on almost 7000 m^2 of good agricultural land and features relatively modern buildings, electricity, telephone lines, wireless internet connections, and drinking water from artesian wells. The land is well suited for agriculture and livestock operations. The land has been reforested over the years, fairly unique in a country often more concerned with extraction than sustainability. The overall school property comprises 62 hectares (153 acres) of usable agricultural land.

The San Francisco Agricultural School traces its origins back to the middle part of the 20th Century. In 1963, *Los Hermanos Misioneros Franciscanos* (the Brotherhood of Franciscan Missionaries) purchased a farm in the Cerrito region of Paraguay with donations from German benefactors. In 1964, the San Francisco School opened its doors and accepted its first cohort of students. In 1978, the Franciscans converted the school into an agricultural school, focusing on a more vocational and practical education than merely classroom instruction. Among other things, the transformation of the school meant a subsidy from the Paraguayan Government that would cover salaries for teachers and most of the school's operating expenses. Student tuition and fees, as well as private benefactors, covered the small percentage of costs that remained. Making a strategic decision in 1980, the order decided to divest themselves of the school. Control and ownership of the school fell to *The Congregation of the Brothers of The Christian Schools of La Salle*, who would operate the school for the next two decades.

1999 brought renewed political violence and uncertainty to Paraguay, underlined by the murders of the vice president and 8 student protestors, the impeachment of the existing president, and the resulting control of the country from a conflicted and tumultuous parliament. The net effect of this uncertainty was to freeze the administrative infrastructure of the Paraguayan state, particularly funding to government supported initiatives and programs, of which the San Francisco School was one.

[9] Data for this section drawn from Burt, M. 2009 "La escuela Agricola autsuficiente." Asuncion: Fundacion Paraguaya

While money did flow to the school, it did so at a snail's pace and left the teachers and other staff at the school with reduced incomes, motivation, and productivity. The *LaSalle Brothers* could provide no additional funds and the school limped along in this precarious financial condition until 2002 when the LaSalle realized they could no longer support a failing school, both financially and academically.

Fundacion Paraguaya takes control

On 01 January, 2003 Fundacion Paraguaya assumed ownership and control of the San Francisco school. The agreement with the La Salle Brothers obligated Fundación Paraguaya to purchase 14 hectares of land (48 hectares of land and all the buildings and infrastructure of the school were donated to the foundation with stipulations as to use and performance), provide 2.4 billion Paraguayan Guaranis (Gs.) (about $500,000) in funding over the next four years to support the school and make infrastructure improvements, and commit to four operating goals:

1) Continue giving technical education on agriculture and livestock to young, rural farmers of scarce means and introduce academic and administrative reforms;

2) Invest resources to subsidize the School's deficit, build new infrastructure; open credit lines and provide technical assistance for graduates;

3) Maintain the boarding school system; and

4) Develop self-help and advisory programs for graduates to be able to apply what they learned at the school in their communities of origin, and facilitate access to credit for production enabling them to carry out viable projects.

The foundation's board was initially skeptical of the San Francisco School project because neither Martin nor anyone else at FP had experience running a school or a farm; however, taking over the school was consistent with FP's goal of economic development for the most vulnerable sectors of Paraguayan society and an opportunity to promote the entrepreneurial spirit in young farmers.

Creating a new and viable business model[10]

FP's objectives for the school were to ensure that students graduate ready to succeed as rural entrepreneurs, obtain mid-level jobs in modern agriculture, teach at other agricultural schools, or attend the university. They hoped to run a school that would enable youth to lift themselves out of poverty, create new jobs, and contribute to their communities' economic development through a new entrepreneurial mindset. Martin also saw that the school provided FP with an opportunity to demonstrate that agricultural education could be financially self-sufficient and teachers could make a decent living by teaching. **Exhibit 3** shows the organizational chart of the school and how the school fits into the larger operations of Fundacion Paraguaya.

[10] Data for this section drawn from interviews with FP personnel, case writer visits and estimates.

Articulating lofty aims for the school proved to be the easiest task in the transition. Martin had just become a significant landholder, the custodian of buildings, infrastructure, and a school with certain expenses but uncertain funding sources. Education also represented an endeavor that historically belied the goals of helping youth escape the trap of rural poverty in Paraguay. Complicating these issues was a lack of adequate record keeping by the LaSalle Brotherhood; Martin was unsure of what his costs and revenues would actually be.

Martin's first decision was to abandon the current business model of state subsidized education and adopt a model where the San Francisco school would operate as a business; students and teachers would earn revenue through agricultural production. Martin's goal was to have the school "self-sustaining" (profitable) within 5 years. During the interim period, Fundacion Paraguaya would cover the schools operating deficits with profits from its microfinance operations. With this funding arrangement in place, the school could move forward independent of the government.

Martin's staff researched to find other financially sustainable (self-reliant) agricultural schools, including contacting USAID, UNESCO, and other international organizations for advice. This research led Martin to see his operation as truly pioneering; the staff found no "self-sustaining" schools, all other models relied on government assistance or private donations. This fact heightened both the board's skepticism about the new venture and Martin's determination to make the new model work.

Early estimates by the staff indicated that the school required about $150,000 US each year to cover costs and implement the educational model they sought. They estimated an additional $150,000 would be needed over the next few years to retrofit infrastructure and to provide an inventory of livestock, seeds, tools, and equipment that would transform the school from a classroom-based to an experientially-based agricultural technical school.

The school's dairy operation became the first priority. In early 2003, the school had an average of 11 cows and produced around 60 liters of milk a day. Output at this level would not even cover the needs of the school's dining hall let alone generate revenue; it would force FP to spend more money to buy milk. The first task involved purchasing enough cattle to triple the herd and stagger the herd between milk and calf production. The foundation also made capital investments to upgrade both the quality and capacity of the Planta Lactea (milk processing plant and cheese factory) to safely and effectively produce milk, yoghurt, and cheese for internal use and sale in local markets. The workflow for students and staff was also restructured: the students in the dairy began work at 4:30 a.m. to operate the milking machines. Over the next year, production would more than triple and Martin had first victory in the quest to make the school profitable.

Martin redesigned the curriculum and organization of the school to create a number of small, independent businesses. One goal of the restructuring was to increase efficiency and output; another goal lay in creating real, measurable accountability for each operation among both teachers and students. The objective for each business: to become self-sufficient and then profitable within a 5 year time horizon. The school organized several agricultural operations,

including: the Tambo (dairy operation), Huerta (organic garden and fruit trees); Chacra (field crops such as corn), Cerdos (pig raising), Cabras (goat raising for both dairy and slaughter), and Forraje (animal feedstock and silage). Each activity was organized as a separate business unit and was expected to produce, sell and generate income for the school. These on-campus businesses could sell to one another or to third parties, but always at market prices.

The school also operated a parador, (small shop) at the edge of the school along the main highway; the San Francisco parador provided a retail outlet for local residents and travelers using the main highway in and out of the Chaco region. The parador sells school produce, meals made with ingredients produced at the school, as well as dry goods bought elsewhere and re-sold.

This structure allowed students to participate in activities along the value chain (for example, from waking at 4:30 a.m. to milk the cows or feed the pigs through working in the Planta Lactea and on through the actual packaging, marketing, and sale of the final products), thus providing a more complete, practical, and entrepreneurial education. Each business could become self-sustaining as its performance was independent of the other businesses at the school. Each teacher and student could be held accountable for results. Teachers created business plans for their individual operations that were reviewed by the central administration on an annual basis. This enhanced accountability but also helped FP leaders to know which units might need help during a growing season and which groups were meeting or exceeding goals to become profitable.

Consistent with the new business model, in September of 2003, FP began its most ambitious adaptation yet—the transformation of the Spiritual Retreat House into a Rural Hotel. The Spiritual Retreat House had been used, as its name implies, as a place for the LaSalle Brotherhood to find solace and refuge. The size and layout of the building allowed FP to fairly easily create an accommodating hotel and conference environment, with a spacious lobby, rustic private rooms and simple, yet technologically sophisticated conference and meeting rooms[11]. Martin envisioned a Hotel designed not as a resort but rather a very nice rural hotel that would be consistent with the goals and mission of the school.

FP invested $50,000 US to remodel and equip the hotel. The completed hotel had conference capacity and accommodation for over 100 people: a house with 7 rooms with 10 beds and shared bathrooms (male and female) and 16 double and triple rooms that have private bathrooms, plus two conference rooms, a spacious reception room, an office for staff, a meeting room to coordinate facilities, and internet access.

As with the other businesses of the San Francisco School, the hotel was led by teachers and run by students. Students worked the front desk and check-in facilities, cleaned and maintained rooms and conference facilities, and handled payments by guests. Guests ate in an adjacent building where students helped prepare and serve meals in a private setting. The hotel provided not only a needed source of income but training ground to prepare students for careers in hospitality, consistent with the broad mission of FP.

[11] On a site visit the casewriter had better wireless internet connections at the Hotel than at Hotels in Asuncion.

The Hotel served as the primary lodging for interns and the many visitors who came to observe the unique beehive of activity that the school had become. Because of its conference facilities and its closeness to Asuncion, the hotel also marketed to local businesses, not-for-profit groups, and government organizations needing retreat, training, or conference space. The hotel differentiated itself from competitors by emphasizing the connection with the school and its overall social mission of student entrepreneurship. Guests not only enjoyed a quiet and rustic retreat, they also contributed to the broad social mission of the San Francisco School. In a shrewd pricing model the hotel priced the rooms and charged guests in their home currency. American guests paid in US dollars, Brazilians in Real, and Paraguayans in Guarani.

The new business model helped FP meet all the commitments it made to the LaSalle Brothers when they took over the school—they provided a relevant and rich education for the students—and they had made the school self-sustaining within the five year time horizon. **Table 1** provides a snapshot of income and costs for the San Francisco school and **Exhibit 4** breaks out the schools anticipated costs and revenues for FY 2010.

Table 1: Becoming self-sustaining within 5 years.

US$	2003	2004	2005	2006	2007	2008P
Income	42,814	45,182	97,434	233,601	253,016	336,112
Costs	199,239	223,261	277,993	316,110	250,710	323,931
Results	-156,424	-178,079	-180,559	-82,510	2,306	12,180
Self-sufficiency	21%	20%	35%	74%	101%	104%

THE STUDENTS

Education is anything but a commodity for rural children in Paraguay; only 36% complete primary schooling, the equivalent of a 9th grade education, and 5% finish secondary school[12], or 12th grade. Data are not available for tertiary[13] schooling among the rural population; however, rates are believed to be extremely low. For the country as a whole, 94% of children complete primary schooling and 56% go on to secondary school[14], and only 10% enroll in tertiary

[12] Data from FP internal interviews.

[13] Tertiary schooling refers to "third stage" schooling, which would include High Schools (United States), Gymnasium (Europe) and College or University education.

[14] Data on general Paraguayan education from UNESCO Institute for Statistics, Data Centre, http://stats.uis.unesco.org/unesco/ReportFolders/ReportFolders.aspx, January 2008.

schools[15]. The country has two major universities, the public National University (*Universidad Nacional*) with 8 campuses in Paraguay's major population centers and the private Catholic University (*Universidad Católica*). The entrance requirements for a university education, a completed secondary school diploma, shut out most Paraguayans and almost all rural Paraguayans. The LaSalle Brothers estimated that not one of the over 600 graduates of the school during their 20 year stewardship had been able to escape poverty and build a better life.

Against this bleak backdrop the San Francisco School sought to bring education to the children of Paraguay's rural poor. In 2002 the school had 70 boarding students, all between the ages of 15-17 and most from poor rural families in the Chaco. FP effectively used its microfinance offices to publicize and promote the school in rural communities where it has a presence. The first two classes (2003 and 2004) were comprised primarily of students recruited through the microfinance channel; however, ensuing classes have learned about the school through a variety of sources such as neighbors, extended family members, siblings and government officials[16]. While most students come from rural areas, the San Francisco School encourages diversity by including urban students as well.

Historically an all-boys school, the San Francisco School began to admit girls in 2006. The class of 2008 included 15 female graduates. The school admits most students according to the following profile:

- They come from very large families that have no financial means or other possibilities for educating their children.
- Their homes are very far from urban centers and training centers.
- They come with low academic qualifications due to the combination of having to work the farm and the great distance to learning centers.
- They are between 15 and 21 years of age.
- They have to have successfully completed the ninth grade.
- They own land where they can apply what they learn.
- They are healthy enough to be able to live as a boarding school student. The school believes in the co-education system between boys and girls, and all live under the boarding school system that can house 120 students.
- Students come from almost all the different departments (provinces) of the country.

In order to be accepted into the school, students must prove they have passed the 9th grade and exhibit a strong work ethic and positive attitude. Following the application process, selected students participate in a two week evaluation/orientation program. The two week program includes classes intended to give all applicants a more equal chance of passing the entrance

[15] http://www.nationmaster.com/graph/edu_ter_enr-education-tertiary-enrollment, accessed 01 December 2010. This compares with 73% tertiary enrollment in the United States, 48% for Argentina, 36% for Uruguay, and 16% for Brazil.

[16] Data for this section from FP internal documents and interviews

exam, which is held at the end of the two-week program. Students are selected at the end of the two-week period on the basis of their scores on the exam and the evaluation of their interest in and aptitude for the practical activities on which the curriculum is based.

Accepted students are required to pay a yearly admittance fee of Gs.100,000 (about $21 USD). Additionally, parents must send Gs. 80,000 (or $17 USD) to help cover the costs of the student's food, boarding, and school supplies. Students are able to defray up to ½ of these costs by doing weekend work on the farm. Students are also encouraged to bring their own tools (machete, shovel, hoe) if possible. This practice prevents theft or loss of the tools, keeping costs down. No students are turned away for a lack of funds to pay these expenses; in those cases a work study program or scholarships can be arranged.

After graduation, 75% of the students say they want to go on and continue their education, as portrayed by a study of the current students (2010), displayed in **Exhibit 5**. Many plan to work while going to school or work to save money and then attend school in the near future. Of the 25% who want to work upon graduating from the agricultural school, most want to work for an existing organization with a few articulating the desire to start their own businesses.

THE MBARACAYU FOREST RESERVE: A NEW OPPORTUNITY

By early 2007 Martin felt confident that the San Francisco school would soon be financially self-sufficient and that the basic model could be transferred to other locations. He soon found an opportunity through the Nike Foundation, which was looking to invest in innovative, self-sustaining models that could economically empower low-income girls. The opportunity entailed working with Fundacion Moises Bertoni[17], a Paraguayan non-profit which administered the Mbaracayú forest reserve, which Martín had helped found in 1988.In addition to running the reserve--64,000 hectares of Atlantic Forest purchased in 1990 and designated as a UNESCO Biosphere of Humanity in 2000,one of Fundacion Moises Bertoni's key objectives is to contribute to sustainable economic development in the area surrounding the Reserve and thereby reduce illegal logging and other threats to the Reserve.

Martín realized that establishing an all-girls school in the Mbaracayú reserve would be a win-win-win solution: it would allow the Fundacion Paraguaya to test the replication of its successful financially self-sufficient school model in a new context; it would provide a relevant, high-quality education to low-income rural girls, empowering them to overcome poverty; and it would establish a much needed pole of sustainable economic development in the community. The Mbaracayu forest, located about 350 km north east of Asuncion, remains remote and undeveloped, and the terms of the agreement creating it were designed to keep it that way. Any extractive use of the land inside the reserve, for natural, cultural, or biological resources such as plant harvesting, was forbidden. Scientific research was a permissible activity and the agreement

[17] The Fundación Moises Bertoni was named after a Swiss-born naturalist who immigrated to Paraguay and became internationally renowned for his scientific discoveries. For more information on the Moises Bertoni Foundation, see: http://www.mbertoni.org.py/?lang=en

guaranteed the Aché (local indigenous population) with the rights to use the Mbaracayu Forest for subsistence hunting and gathering activities.[18]

The Mbaracayu site had a scientific research station which consisted of a handful of buildings, some electrical and plumbing hookups, and an unimproved dirt road leading to the facility. Travel from Asuncion required 6 hours and 4x4 vehicles as the roads were in such terrible condition[19]. The closest village was about 30 minutes away, and the largest town of any size was about 2 hours away. While both individual and commercial traffic to and from the reserve occurred on a daily basis, the condition of the road made passage uncertain, time consuming, and costly.

In 2007 an opportunity arose to start a new school based on the same principles, but only for girls. Despite its remote location, the Mbaracayu reserve proved an attractive place to establish this new school. The Foundation Moises Bertoni shared the same values as the FP (e.g. a commitment to sustainable development and the elimination of poverty through entrepreneurship), it had basic infrastructure available, and there was a great lack of educational opportunities in the area, especially for girls.

Martin wanted to replicate the success of the San Francisco School in the Mbaracayu and provide educational opportunities for local, low-income, young women, including the indigenous Aché and Ava Guarani populations. Martin saw both objectives as consistent with and important to the long-term mission of both Fundacion Paraguaya and Fundacion Moises Bertoni. However, after admitting the first class in 2009, significant differences between the two operations became readily apparent.

He had inherited the San Francisco school as a complete operating entity; complete with a well-developed educational infrastructure, cultivated fields, and close proximity to Asuncion. The development of a business model came easily as the agricultural assets were in place: he only needed to refine the model and enhance the asset base. The Mbaracayu property, on the other hand, presented a tough set of infrastructure challenges. The preserve contained a collection of buildings that housed a few scientists doing research and some 15 forest rangers. While there was a building suitable for a dormitory, dedicated classroom space did not exist. Importantly, the property had nothing even close the Spiritual Retreat House that could be converted into a hotel; building one from the ground up would cost significantly more than the $50,000 US in the improvements required at the San Francisco School. Internal estimates ranged from 2-6X of the cost at San Francisco to build a new hotel.

[18] Data from "the Mbaracayu Forest Reserve in Paraguay," Fundacion Moises Bertoni, 2000. Available for download at http://www.mbertoni.org.py/documentos/mbaracayuforest.pdf.

[19] The case writing team travelled to the Mbaracayu in 2010. The condition of the road to the school was, by any developed country standard, simply atrocious. Maximum speeds were 40km/hr.

Replicating the business model would also prove challenging. The Mbaracayu, as a protected forest reserve, could not be used for any livestock-based agricultural activities and there were severe restrictions on harvesting native plants or cutting trails through the forest. FP operated a small herd of milk cows, a chicken coop producing eggs and meat, and a small pig-farming operation just off the reserve. The prospects for creating a financially self-sufficient school within a 5-year time horizon appeared quite challenging.

The Mbaracayu held promise as a tourist destination, and Martin decided the core business of the new school would be ecotourism. Ecotourism entails a visit to an exotic or endangered destination, to observe and preserve the earth's natural beauty[20] and has been a rapidly growing industry, with growth rates at 20-30% annually since the 1990's[21]. Nature tourism—the segment Mbaracayu would target, was growing at 10-12% per year. Tourists staying at nature-based, remote lodges spent up to18 times as much as those arriving to a country on cruise ships or other traditional means. Ecotourism tended to keep the money local; the hotel staff, food service workers, and tour guides are local. Most of the supplies are sourced in the local economy.

Martin checked off the key differences in the business models. To create an ecotourism destination, Martin needed to enlarge and upgrade the lodging facilities and solve a number of supply and logistical challenges to bring tourists into the Mbaracayu. Activities such as nature trails, expeditions, etc., would also have to be expanded. Meeting these challenges involved larger sums of money than his organization had to invest before. The distance to and from the school would make monitoring the operation more difficult.

As challenging as it would be to establish the school and its businesses, making the whole enterprise financially self-sufficient would prove to be a still more difficult task. Unlike the San Francisco hotel with its access to the Asuncion market, the new property would have to market to new segments, some of them foreign. This would create a demand for marketing talent and a sophisticated marketing program. The Mbaracayu had no operating school to take over, so students and teachers would have to all be recruited. Importantly, the entrepreneurial culture and spirit that FP had built at the San Francisco School would have to be ingrained and built from scratch—a very great challenge that Martin had only begun to deeply appreciate.

As Martin turned out the lights and prepared to leave his office that day he turned over several key questions in his mind: Could the San Francisco model be replicated or was its success due to unique and idiosyncratic factors? Was the Mbaracayu property too remote and the area too under-developed to permit establishing a viable eco-tourism business? Without a busy hotel would the San Francisco model transfer at all? As he moved forward, what were the most critical elements to transplant from the San Francisco model? Was the effort worth the cost in time and energy?

[20] Ecotourism described at http://wordnetweb.princeton.edu/perl/webwn?s=ecotourism

[21] Data for this section taken from TIES (The International Ecotourism Society). 2006. TIES Global Ecotourism Fact Sheet, Washington DC. Available at www.ecotourism.org.

Exhibit 1: General Economic/Social Indicators for Paraguay

General Indicators	2001	2003	2005	2007	2008
Total Population	5,460,533	5,681,974	5,904,155	6,126,643	6,237,855
Rural population	2,405,911	2,430,748	2,450,224	2,469,037	2,476,428
GDP (current US$)	6,445,764,901	5,551,643,681	7,473,231,062	12,222,355,341	16,873,155,276
GNI (current US$)	6,461,560,950	5,543,243,751	7,486,046,511	12,456,124,174	16,711,025,139

Education Indicators	2001	2003	2005	2007	2008
School enrollment, primary (% gross)	118.6%	113.1%	111.3%	105.4%	-
School enrollment, secondary (% gross)	65.2%	65.3%	66.5%	65.7%	-
School enrollment, tertiary (% gross)	17.6%	24.7%	25.5%	28.6%	-
Public Expenditure per student, primary (% of GDP per capita)	13.5%	13.2%	-	10.7%	-
Public Expenditure per student, secondary (% of GDP per capita)	16.0%	14.8%	-	16.3%	-
Public Expenditure per student, tertiary (% of GDP per capita)	48.7%	31.6%	-	26.0%	-

Labor Force Indicators	2001	2003	2005	2007	2008
Cost of business start-up procedures (% of GNI per capita)	-	209.9%	147.8%	77.6%	67.9%
Total Labor Force	2,350,644	2,504,417	2,659,885	2,824,146	2,936,572
Labor participation rate, total (% of total population ages 15+)	69.1%	69.7%	70.2%	70.8%	71.8%
Unemployment (% of total labor force)	7.6%	7.9%	-	5.6%	5.7%
Employment to population ratio, ages 15-24, total (%)	54.7%	54.7%	57.4%	57.7%	57.7%

Life Indicators	2001	2003	2005	2007	2008
Life Expectancy at Birth(years)	70.3	70.8	71.3	71.7	71.9
Fertility Rate (births per w oman)	3.6	3.4	3.3	3.1	3.0
Infant Mortality Rate (per 1,000 live births)	-	-	21.9	20.6	20.0
Crude Death Rate (per 1,000 people)	5.7	5.6	5.6	5.5	5.5

Wealth Distribution Indicator	2001	2003	2005	2007	2008
GINI index	-	-	53.9	53.2	-

Source: World Bank Country Profiles. Definitions for each category can be found at http://data.worldbank.org/data-catalog

Exhibit 2: Mission, Strategic Objectives, and Values of Fundacion Paraguaya

Mission

Fundación Paraguaya promotes entrepreneurship, enabling people of limited resources to create jobs and increase their family income.

Strategic Objectives

Objective 1: Discover and promote new methodologies to provide people of limited means with the tools necessary to achieve economic success."

Objective 2: Expand our microfinance program to reach more entrepreneurs of limited resources.

Objective 3: Increase the reach of our education program on entrepreneurship for children and young people.

Objective 4: Achieve financial self-sufficiency at our Agriculture High School.

Objective 5: Spread the self-sufficiency model by disseminating and replicating it throughout the world in collaboration with *Teach A Man To Fish* foundation.

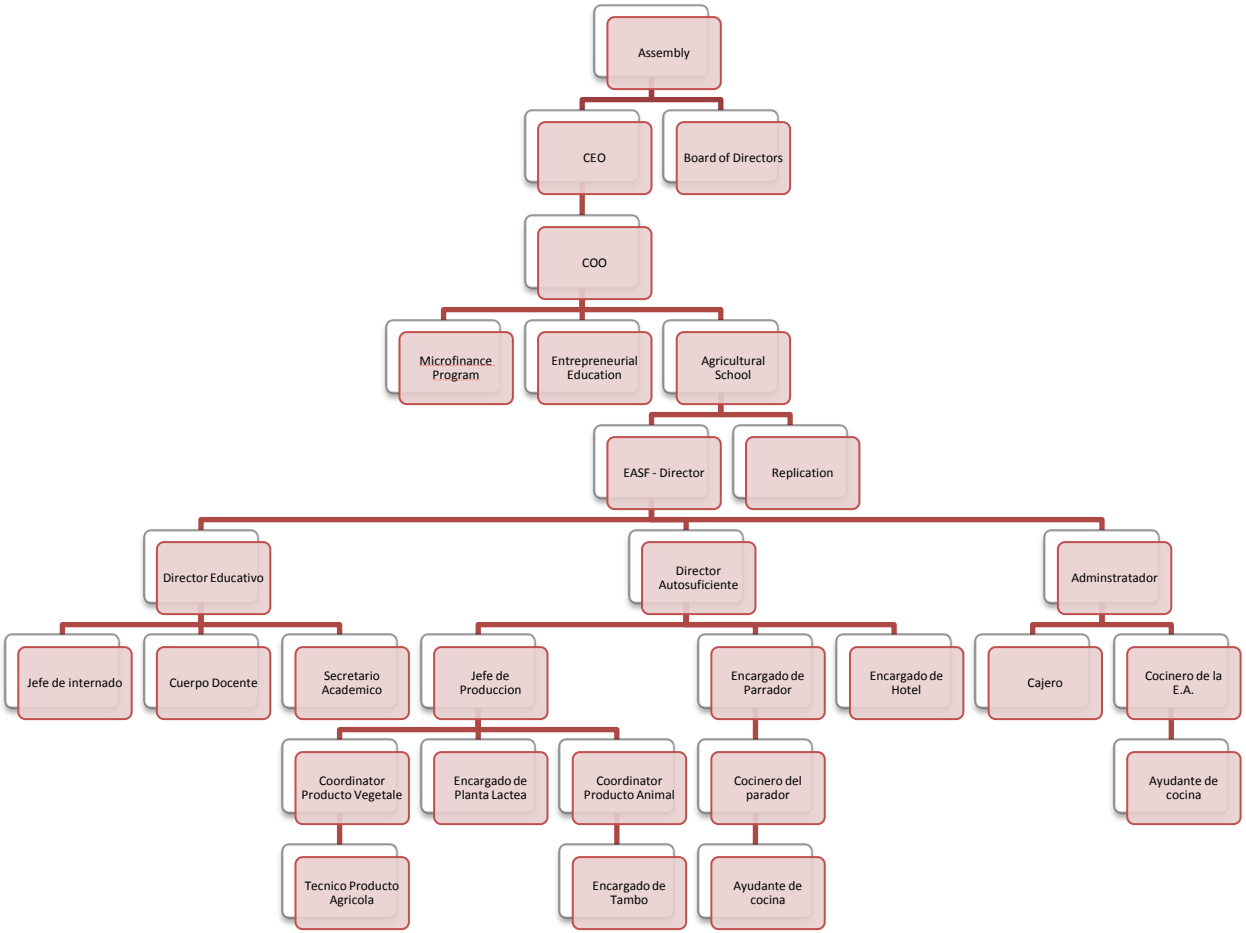
Our Principles

We undertake to comply with the following principles and values:

- We are a private organization, part of civil society, self-governed, with social responsibility.
- Our concept of development has a humanistic vision: we mainly help the neediest sectors and promote the sustainable use of natural resources.
- We maintain independence in our behavior. We wish to generate models of responsible and transparent behavior at the institutional and personal levels. We do not discriminate in any way.
- We optimize the use of resources in order to reach the greatest number of our target population possible, respecting the rights of native peoples and other minority groups.
- We are non-profit. Our surplus, if any, is not distributed among our members; we place it at the service of capitalizing our projects and creating new programs. We comply with legislation applicable to us, whether national or international.
- Our administration is transparent and we emphasize accountability. We seek financial sustainability to ensure the continuity of our programs and projects. We are innovative and seek to apply vanguard methodologies and technologies.
- We seek to promote self-help, a comprehensive approach to people and citizen participation.

Source: http://www.fundacionparaguaya.org.py/index.php?id=filosofia

Exhibit 3: Organizational Structure of FP and the San Francisco School



Source: FP internal documents

Exhibit 4(A): Income for the San Francisco School, 2010

SAN FRANCISCO AGRICULTURAL SCHOOL
2010 ANNUAL BUDGET

INCOME	Annual Budget		% of Total
Livestock	**Gs**	**199,226,918**	**12.5%**
Milk	Gs	9,967,500	0.6%
Pigs	Gs	58,000,000	3.6%
Chickens	Gs	9,000,000	0.6%
Eggs	Gs	82,084,578	5.1%
Goat Milk and Meet	Gs	20,439,840	1.3%
Tilapia	Gs	5,060,000	0.3%
Rabbits	Gs	2,945,000	0.2%
Honey	Gs	11,730,000	0.7%
Agriculture	**Gs**	**47,518,020**	**3.0%**
Orchard	Gs	23,059,520	1.4%
Farm	Gs	18,338,500	1.1%
Nursery	Gs	3,150,000	0.2%
Medicinal Plants	Gs	2,970,000	0.2%
Hotel	**Gs**	**402,895,035**	**25.2%**
Lodging and Food Services	Gs	402,895,035	25.2%
Community Youth Service	**Gs**	**120,015,030**	**7.5%**
Events	Gs	120,015,030	7.5%
Academics	**Gs**	**80,520,000**	**5.0%**
Tuition and Fees	Gs	80,520,000	5.0%
Parador (Small Store)	**Gs**	**335,650,000**	**21.0%**
Merchandise and Food	Gs	335,650,000	21.0%
Dairy Industry	**Gs**	**119,984,841**	**7.5%**
Milk	Gs	119,984,841	7.5%
Technical Assistance in Replication	**Gs**	**150,000,000**	**9.4%**
Replciation Fees	Gs	150,000,000	9.4%
Other Income	**Gs**	**142,000,000**	**8.9%**
Barn Rentals	Gs	36,000,000	2.3%
Souvenir	Gs	4,000,000	0.3%
Travel Agency	Gs	12,000,000	0.8%
Courses and Workshops	Gs	59,000,000	3.7%
Production Technical Support	Gs	31,000,000	1.9%
Total Income	**Gs**	**1,597,809,845**	**100%**

Source: FP internal documents

Exhibit 4 (B): Expenses, San Francisco School, 2010

SAN FRANCISCO AGRICULTURAL SCHOOL
2010 ANNUAL BUDGET

EXPENSES	TOTAL		% of Total
Salaries	Gs	554,684,926	34.9%
Electricity	Gs	66,000,000	4.2%
Security	Gs	13,482,228	0.8%
Depreciation	Gs	253,284,000	15.9%
Phone and Internet	Gs	7,200,000	0.5%
Maintenance	Gs	20,817,754	1.3%
Agricultural Chemical Products	Gs	-	0.0%
Cattle Chemical Products	Gs	15,604,400	1.0%
Staff and Student Meals	Gs	100,387,972	6.3%
Cost of the Hotel	Gs	130,727,516	8.2%
Adjustments	Gs	118,384,570	7.4%
Hardware	Gs	1,902,000	0.1%
Tools	Gs	1,024,340	0.1%
Fuel	Gs	36,000,000	2.3%
Office Supplies	Gs	3,000,000	0.2%
Internship Expenses	Gs	2,600,000	0.2%
Taxes and Fees	Gs	2,500,000	0.2%
Travel and Per Diem	Gs	3,500,000	0.2%
Miscellaneous Costs	Gs	5,000,000	0.3%
Photocopies and Binding	Gs	750,000	0.0%
Cleaning Costs	Gs	4,610,360	0.3%
Dairy Costs	Gs	32,395,907	2.0%
Farm Costs	Gs	2,064,900	0.1%
Orchard Costs	Gs	2,482,350	0.2%
Nursery Costs	Gs	1,320,000	0.1%
Cost of the Parador	Gs	209,130,000	13.2%
Cost of Medicinal Plants	Gs	330,000	0.0%
Total Expenses	Gs	1,589,183,223	100%
Cash Flows	Gs	8,626,621	
Self-Sufficiency		101%	

Source: FP internal documents

Exhibit 5: Graduating student destinations

Activities of Graduates of the San Francisco Agricultural High School

Activity	2003	2004	2005	2006	2007	2008
Studying in Paraguay	3	4	7	4	11	12
Studying abroad	0	3	1	1	0	0
Agricultural sector jobs	6	9	12	13	8	9
Working on family farms	2	4	7	9	9	12
Extension agents	0	1	2	4	0	5
Teachers at Agr. Schools	1	5	1	0	1	3
No data	6	1	0	0	0	
Students/graduating class	**18**	**27**	**30**	**31**	**29**	41

Source: FP internal documents

FUNDACION PARAGUAYA (B): MEASURING SOCIAL IMPACT

By mid-2010 Fundacion continued to make progress at the Mbaracayu property. Martin had been able to recruit an initial group of students, all girls, to the new school and they had begun the long process of creating a financially self-sufficient school along the lines of the San Francisco School. The new school would leverage the unique ecological elements of the Mbaracayu Reserve while transplanting the model and culture of entrepreneurial education that worked so well at San Francisco. The students had created a small nature trail as the opening act in creating an ecotourism destination hotel, and the forest reserve's modest guest quarters were being upgraded, with the work estimated to be complete by 2011.

In addition to the school in the Mbaracayu, Martin was working on projects in other countries, such as Bolivia, Brazil, Nicaragua, Kenya and Uganda. As the business model began to be copied around the region—and hopefully the world—Martin began to understand and appreciate a key barrier to replication: the amount of funding necessary to establish the San Francisco model. He had been lucky there to inherit a fully functioning enterprise. Replicating the model elsewhere would often mean building schools from the ground up.

Commercial financing proved almost impossible; it was as if Martin and the bankers spoke completely different languages. Martin instead hoped to turn to Venture Philanthropists, a new breed of social investor. Unlike traditional philanthropists who donated based on the worthiness or appeal of the cause, venture philanthropists, such as the Acumen Fund, based their initial and ongoing support on the potential social return on investment (SROI) of different opportunities.

SROI

A methodology for calculating a venture's SROI first appeared in 2000 from the Roberts Enterprise Development Fund[1]. In 2003 the Hewlett Foundation, established by legendary Hewlett-Packard founder Bill Hewlett, helped shape the nascent movement by bringing together the primary players for a conference to establish best practices.

Professor Paul C. Godfrey prepared this case with the help of Raymond Kearney, Jasmine Palmer, and Todd Manwaring as a basis for class discussion and not to illustrate either effective or ineffective practice. Some license has been taken in the presentation and exclusion of all relevant case information.

[1] Although the terminology has changed a bit over the years, the concept of measuring total project impact appeared long before the turn of the millennium and the seminal work in the field was published in 1975: "Economic Analysis of Projects" by Squire and Van der Tak, and published by the World Bank. At that time, the term used was "economic rate of return", which attempted to take into account all the social costs and benefits of an investment, versus "financial rate of return" which, as always, just considered financial returns.

2006 brought further development to the industry with the publication of *Social Return on Investment: a Guide to SROI analysis.* In 2007 the New Economics Foundation (NEF) published a do-it-yourself (DIY) guide to calculating social return on investment. By 2010 a number of different methodologies existed to calculate SROI, and while there was a move to establish a common standard, there were currently many approaches. While there were many variations, any reasonable calculation of SROI included 6 common principles and procedures:

1. *Stakeholder analysis*—who were those affected by the social venture? The social impact of any venture could affect direct clients (such as students), but also spread its effects out like ripples in a pond (e.g., moving outward from students nuclear family to extended family to firms hiring graduates to communities, churches, other schools, and government entities). Defining the relevant number of direct and ripple stakeholders could significantly affect the final calculation. Indeed, while "stakeholder analysis" seemed to be an innocuous step in the process, the actual practice of determining who would be affected, and to what degree, became a critical, and often murky, determination.

2. *Cost evaluation.* What were the costs of delivering the venture or service? How were those costs allocated between capital and operating expenses? How did costs behave over time (for example, did costs decrease as learning occurred or increase as new clients were served)? For many ventures this would be the easiest step if they had good accounting systems and enough experience to know how costs would behave over time and economic cycles.

3. *Determining the financial and non financial benefits of the program.* Programs like education could be measured in monetary outcomes such as increased earning power. Earning power was probably the most common financial measure used to calculate SROI, even when the effect on some social intervention and earning was tenuous. Estimating the non-financial benefits raised a host of issues. How exactly did one qualify and quantify non-financial outcomes such as childhood immunizations, improved nutrition, or the non-economic value of literacy and education? How much is health worth? Squire and van der Tak (1975) presented a method for these calculations using shadow prices. For an adult you may be able to measure lost days at work, but what about for children, youth, or those not in the work force? Much like stakeholder analysis, this step sounded much easier than it was in practice—there were few guidelines about how to quantify the total benefits of social ventures.

4. *Monetization.* All models of SROI relied, ultimately, on the tools of discounted cash flow analysis, often referred to as the Net Present Value (NPV) of a venture. Adopted wholesale from corporate finance, NPV calculates the present value of future cash flows. The model can't include non-monetary values so monetization had to be done as an input to the model. If it proved difficult to quantify non-financial benefits, then monetizing those benefits became an almost impossible task. Many times the non-quantifiable benefits would not be included in an SROI analysis because they simply could not be monetized.

There was strong pressure to reduce all quantifiable benefits to earnings power, because earnings could at least be quantified. The challenge lay in the assumptions linking the venture to current and future earnings. For example, how would infant nutrition programs lead to increased earning power, measured at age one? Good analysis required rigorous thinking about these causal linkages.

5. *Choose an appropriate time horizon and discount rate.* Programs had different impact horizons. Some, such as disaster relief, could be measured in days or months. Others, such as education or training programs, had a much longer time horizon over which they affected stakeholders. Choosing the right time horizon was important because if one chose a short time horizon (say 5 years), the impact of programs such as education may not even be apparent. However, choosing a longer time horizon raised the specter of cross-contamination: how much of the effect of later earnings, for example, could be attributed to early interventions. Longer time horizons also dictate a higher risk premium to compensate for the inherent uncertainty in forecasting cash flows far into the future.

6. *Calculate and report SROI.* This step, given the difficulty of the previous ones, proved relatively easy. One simply created a model that captured monetary benefits and costs in each period for a set number of periods, for example 5 years or 20 years. These social "cash flows" could be entered into a spreadsheet and simple commands would calculate the NPV of the social venture.

SROI at Fundacion Paraguaya

Martin had directed his staff to calculate the SROI of the San Francisco School. By mid-2010 the staff had worked through the difficult and nebulous process of modeling the SROI of the San Francisco School. Because there were so few alumni from the school—less than 200—since they took control in 2003, finding hard data on the earning power of graduates proved difficult. Even where earnings could be verified, these graduates were so early in their careers and operating such uncertain ventures that projecting their cash flows into the future proved highly speculative at best.

Based on their own experiences with the parents of their students, the average family income the students came from was about $50 per month. This became the baseline for the model. Based on what they knew from their graduates, they believed that an education from the San Francisco School would double or triple these earnings. A mid-range estimate would put San Francisco alumni earning about 2/3 of the average Paraguayan income, or about $150 per month.

Even if these numbers proved correct, the staff was concerned about how much of that increase could be attributed to the San Francisco education. There were so many intervening factors, family life, illness, marriage, etc. that muddied the waters. **Exhibit 1**presents part of the analysis done by the staff.

Martin felt that the San Francisco School made a tremendous impact on the lives of the students, and the numbers were both impressive and staggering—the model suggested the school dramatically impacted the future earning power of the students, and the SROI calculated by Martin's staff would be the envy of many of the leading business corporations.

These numbers could go a long way toward helping him get venture financing (through either social venture capital organizations or traditional foundations) to replicate the San Francisco model in other Latin American or African countries. Martin liked the analysis and the results, but as he put down the report he began to wonder how accurate the measurement was.

The team did not account for the different career paths of the graduates, with some going to college, some to companies, and some back to their family farms. Martin knew from his days in the United States that the lifetime earnings of a college graduate roughly doubled those of a High School graduate[2]. Would the same hold true for Paraguay? Did the team follow the six core SROI principles in the San Francisco school case? Had his team counted all of the costs and considered all of the gains? Were their assumptions reasonable and valid? Was the San Francisco School so unique that its impact would be different from the new schools FP hoped to build? How could he improve on the measurement of SROI or would he need to start again from scratch?

Aside from these vexing questions, what Martin wanted was evidence that the methodology, as well as the final SROI number, could be used on any of the educational projects emerging around the world. In short, Martin wondered how innovative the SROI methodology should be, how defensible and robust it was to challenges and questions, and whether he could find a methodology that could be reasonably applied to all his social ventures. Only then would be able to produce final numbers that the Venture Philanthropists would trust enough to provide the much needed investments.

[2] Data from the U.S. Census Bureau indicates that the average annual earnings for a High School Graduate were $25,900 in 2002, while the average annual earnings for College Graduates (Bachelor's Degree) was $45,900. U.S. Census, 2002. The big payoff: Educational attainment and synthetic estimates of work life earnings. Washington, D. C.

Exhibit 1: FP In-house SROI calculation, key assumptions

Outcome	
Av. increased earnings of Self-Sufficient School graduates	300%
Typical annual earnings of rural head of household (USD)	600
Monetary value of increased earnings (USD)	1,200
Number of graduates in each year group benefitting	60
Increased earnings from community & family program participant	125
Discount rate	4%
Number of students attending school each year	180
Increased productivity of graduate vs regular employees	20%
Monetary value of more productive employees to company (USD)	250
Number of school graduates taking up wage employment per year	60

Exhibit 1: FP SROI Calculations, Spreadsheet sample, refer to attached spreadsheet for full model (in Paraguayan Guaranis)

CALCULATION	1	2	3	4	5	6	7
Increased earnings of graduates							
Increased earnings - Grad group 1				72,000	72,000	72,000	72,000
Increased earnings - Grad group 2					72,000	72,000	72,000
Increased earnings - Grad group 3						72,000	72,000
Increased earnings - Grad group 4							72,000
Increased earnings - Grad group 5							
Increased earnings - Grad group 6							
Increased earnings - Grad group 7							
Increased earnings - Grad group 8							
Increased earnings - Grad group 9							
Increased earnings - Grad group 10							
Increased earnings - Grad group 11							
Increased earnings - Grad group 12							
Increased earnings - Grad group 13							
Increased earnings - Grad group 14							
Increased earnings - Grad group 15							
Increased earnings - Grad group 16							
Increased earnings - Grad group 17							
Increased earnings - Grad group 18							
Increased earnings - Grad group 19							
Increased earnings - Grad group 20							
Increased earnings - Grad group 21							
Increased earnings - Grad group 22							
School income	10,000	35,000	65,000	100,000	158,500	174,350	191,785
Monetary value of increased productivity				15,000	30,000	45,000	60,000
Increased income from community / family program	37,500	75,000	112,500	168,750	345,000	521,250	697,500
Total Social Benefit	47,500	110,000	177,500	355,750	677,500	956,600	1,237,285
Present Value of Benefit (Discounted)	**45,894**	**102,686**	**160,095**	**310,016**	**570,437**	**778,195**	**972,495**
Total Present Value of School	**42,278,737**						

Social Return on Investment	**26.05 times**
Total PV of Benefits after only 10 years	*6,899,605*
SROI at 10 years	*4.25 times*
Total PV of Benefits after only 15 years	*16,334,025*
SROI at 15 years	*10.06 times*

FUNDACION PARAGUAYA (C): CHALLENGING SROI

At home over the weekend, Martin read an article that substantiated many of his concerns about social impact measurement. The article, in a leading academic publication, was very critical of the entire concept of social impact measurement. The authors highlighted four problems inherent to measuring social impact and social enterprises in general.

Almost all social impact measures use a version of the Net Present Value (NPV) model. Net Present Value is a tool used by financial economists and corporate planners to look at the value of a potential investment over time. While NPV was a valuable tool in the corporate world and a cornerstone of most MBA toolkits, the article noted that NPV may not be appropriate for social impact measurement.

First, calculating NPV requires the ability to accurately, or at least reasonably, project costs and revenues into the future. While this works for new products or efficiency creating equipment, how exactly does one measure the revenues of vaccinations, or infant nutrition programs, for example? If an infant survives and grows to adulthood because of effective nutrition programs, how much of his or her future earnings should be credited back to the program? How much to choices made later in life? The article noted that one could make a reasonable argument for either scenario, with the lifetime earnings of that individual (and their posterity) all discounted back to the present. With those assumptions any social venture produces massive social impacts. Programs serving children would have the greatest social impact because children have the longest time horizon over which to discount earnings.

The second problem deals with the outcomes of the NPV analysis rather than the inputs. Decision makers typically use NPV to decide which projects to fund—with the rule being fund the projects with the highest NPV. While this works great for business investment, social activities may operate on a different logic. For example, if infant nutrition programs have higher NPV's than adult literacy programs, should social philanthropists fund only those projects with the greatest social impact? What happens if some very valuable programs, such as adult literacy, don't make the cut? Subjecting social projects to financial and market-based evaluations may sound great in theory but produce what economists are prone to call "perverse outcomes."

The third problem with the concept is that impact measurement may stifle innovation in the social sector. Innovative programs tend to have very long lead times to bring projects to measurable fruition, and many innovative projects fail during the first few iterations, only becoming successful after administrators get down learning and experience curves. If NGO's or other service providers are subject to social impact measurement criteria for their survival there exists a clear disincentive for experimentation and innovation. While beneficial in the short run social impact measurement may prove destructive in the long run

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Finally, social impact measurement reduces work on social issues to economic criteria and can easily displace other motivations such as goals of social justice, or a concern for aesthetic advancement. Do people have a right to education and literacy, or a right to clean water or adequate food simply by virtue of being human? Should literacy programs exist only if they represent a better investment than other social initiatives, or should people have a right to know how to read? Aren't some things valuable in their own right, not because they produce some measurable social value? Social impact measurement blurs the line between social and economic value, and may lead to situations where basic rights and needs become relative rather than absolue.

As Martin put down the journal his concerns about the work his staff had done became more pronounced. What had seemed to be such a clear and simple exercise—how to measure the tangible economic impact of the San Francisco School—now seemed so hazy and complicated. Martin's questions moved from the accuracy of social impact measurements to the morality of the undertaking. The question become not "did we get the right answer?", but "is social impact measurement the right concept and tool?"